ABSTRACT OF THE DISCLOSURE

A real picked-up image containing an image of a position detection mark 13 is picked up by an image pickup unit 1 and is stored in image memory 5 through an interface section 2. A CPU 6 generates a pseudo image on which change in the image pickup conditions is reflected from the stored real picked-up image and detects an image of an object using a predetermined image processing parameter from the generated pseudo image. If the object image is erroneously detected from the pseudo image, the image processing parameter is changed so that object image is not erroneously detected.